

AMENDMENTS TO THE CLAIMS

Upon entry of this amendment, the following listing of claims will replace all prior versions and listings of claims in the pending application.

IN THE CLAIMS

Please amend claims 2 and 14 and cancel claims 4 and 16 as follows:

1. (Canceled).
2. (Currently Amended) A method for performing by proxies discovery of a maximum transmission unit of a path between a client and a server in a more efficient manner, the method comprising the steps of:

- (a) determining, by a first proxy, a size for a path maximum transmission unit (PMTU) for transmitting network packets between a client and a server by increasing a value of the PMTU by a predetermined percentage for each round-trip-time that elapses without receipt of an indication that fragmentation has occurred;

- (b) repacketizing, by the first proxy, packets received from the client for transmission to the server into packet sizes in accordance with the size of the PMTU;

- (c) transmitting, by the first proxy, the repacketized packets to the server;

- (d) detecting, by a second proxy, a packet received from transmission of repacketized packets from the first proxy is fragmented; and

- (e) transmitting, by the second proxy to the first proxy in response to the detection, an acknowledgement packet marked with an indicator that fragmentation has occurred.

3. (Previously presented) The method of claim 2, wherein step (a) comprises determining, by the first proxy, a value for the PMTU greater than the current value of the PMTU.

4. (Canceled)
5. (Previously presented) The method of claim 2, wherein step (c) comprises transmitting, by the first proxy, the repacketized packets without one of prohibiting fragmentation or setting the defragmentation flag of the packet off.
6. (Previously presented) The method of claim 2, wherein step (c) comprises generating, by the second proxy, the acknowledgement packet to have a bit in a transport control protocol header set to indicate that fragmentation has occurred.
7. (Previously presented) The method of claim 2, wherein step (c) comprises generating, by the second proxy, the acknowledgement packet to have an option field in a transport control protocol header set to indicate that fragmentation has occurred.
8. (Previously presented) The method of claim 2, wherein step (c) comprises generating, by the second proxy, the acknowledgement packet to have a field in an internet protocol header set to indicate that fragmentation has occurred.
9. (Previously presented) The method of claim 2, comprising stopping, by the first proxy, PMTU discovery in response to receipt of the acknowledgement packet.
10. (Previously presented) The method of claim 2, comprising reducing, by the first proxy, the size of the PMTU in response to receipt of the acknowledgement packet.
11. (Previously presented) The method of claim 10, comprising transmitting, by the first proxy, repacketized client packets formed in accordance with the size of the decreased PMTU.
12. (Previously presented) The method of claim 10, comprising reducing the size of the PMTU by one-half.

13. (Currently amended) The method of claim 4 2, wherein step (a) comprising triggering the determination of the PMTU by the first proxy in response to one of receipt of the indicator that fragmentation has occurred or an elapse of time.

14. (Currently Amended) A system for performing by proxies discovery of a maximum transmission unit of a path between a client and a server in a more efficient manner, the system comprising:

a first proxy determining a size for a path maximum transmission unit (PMTU) for transmitting network packets between a client and a server by increasing a value of the PMTU by a predetermined percentage for each round-trip-time that elapses without receipt of an indication that fragmentation has occurred, repacketizing packets received from the client for transmission to the server into packet sizes in accordance with the size of the PMTU, and transmitting the repacketized packets to the server; and

a second proxy detecting a packet received from transmission of repacketized packets from the first proxy is fragmented, and transmitting to the first proxy in response to the detection of an acknowledgement packet marked with an indicator that fragmentation has occurred.

15. (Previously presented) The system of claim 14, wherein the first proxy establishes a value for the PMTU greater than the current value of the PMTU.

16. (Canceled)

17. (Previously presented) The system of claim 14, wherein the first proxy transmits the repacketized packets without one of prohibiting fragmentation or setting the defragmentation flag of the packet off.

18. (Previously presented) The system of claim 14, the second proxy generates the acknowledgement packet to have a bit in a transport control protocol header set to indicate that fragmentation has occurred.
19. (Previously presented) The system of claim 14, the second proxy generates the acknowledgement packet to have an option field in a transport control protocol header set to indicate that fragmentation has occurred.
20. (Previously presented) The system of claim 14, the second proxy generates the acknowledgement packet to have a field in an internet protocol header set to indicate that fragmentation has occurred.
21. (Previously presented) The system of claim 14, wherein the first proxy stops PMTU discovery in response to receipt of the acknowledgement packet.
22. (Previously presented) The system of claim 14, wherein the first proxy the first proxy reduces the size of the PMTU in response to receipt of the acknowledgement packet.
23. (Previously presented) The system of claim 14, wherein the first proxy transmits repacketized client packets formed in accordance with the size of the decreased PMTU.
24. (Previously presented) The system of claim 14, wherein the reduced comprises one-half of the size of the PMTU.
25. (Previously presented) The system of claim 14, wherein the first proxy is triggered to perform PMTU discovery in response to one of receipt of the indicator that fragmentation has occurred or an elapse of time.
26. (Allowed) A method for performing by proxies discovery of a maximum transmission unit of a path between a client and a server in a more efficient manner, the method comprising the steps of:

- (a) determining, by a first proxy, a size for a path maximum transmission unit (PMTU) for transmitting network packets between a client and a server, the size of the PMTU increased by a predetermined percentage for each round trip time that elapsed without receipt of an indicator that fragmentation has occurred;
 - (b) repacketizing, by the first proxy, packets received from the client for transmission to the server into packet sizes in accordance with the size of the PMTU;
 - (c) transmitting, by the first proxy, the repacketized packets to the server;
 - (d) detecting, by the second proxy, a packet received from transmission of repacketized packets from the first proxy is fragmented; and
 - (e) transmitting, by the second proxy to the first proxy in response to the detection, the acknowledgement packet marked with the indicator that fragmentation has occurred.
27. (Allowed) The method of claim 26, further comprising not receiving, by the first proxy, during a next round-trip time a second acknowledgement packet, and determining, by the first proxy, to increase the value of the PMTU by the predetermined percentage.
28. (Allowed) The method of claim 26, further comprising stopping, by the first proxy, PMTU discovery responsive to receiving the acknowledgment packet.